



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 HANFORD PROJECT OFFICE
712 SWIFT BOULEVARD, SUITE 5
RICHLAND, WASHINGTON 99352

0048644

February 25, 1998



Ms. Linda K. Bauer
U. S. Department of Energy
Richland Operations Office
P. O. Box 550, MSIN: H4-83
Richland, WA 99352

Re: Notice of Violation of Requirements Defined in the Environmental Restoration Disposal Facility Record of Decision and the 200-UP-1 Record of Decision.

Dear Ms. Bauer:

This Notice of Violation serves to inform the U.S. Department of Energy (DOE) of violations of certain provisions of the Environmental Restoration Disposal Facility Record of Decision (ERDF ROD) and the 200-UP-1 Record of Decision (200-UP-1 ROD), as well as noncompliance with the 200-UP-1 Waste Control Plan and the Strategy for Management of Investigation Derived Waste.

The following violations of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), the Resource Conservation and Recovery Act, as amended (RCRA), RCRA's implementing regulations codified in Chapter 40 of the Code of Federal Regulations (CFR), and the Washington Administrative Code (WAC), as both Applicable or Relevant and Appropriate Requirements (ARARs) under CERCLA and the authorized RCRA program in the State of Washington, were observed:

Failure to Remove Leachate Tank from Service at ERDF

40 CFR § 264.196 and WAC 173-303-640(7) specify that a tank system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately. The ERDF ROD specifies that the operation of the facility shall comply with 40 CFR Part 264 and WAC 173-303. The current design specifications and operations plan specify that the tanks will comply with these requirements of 40 CFR § 264.196 and WAC 173-303-640. The U.S. Environmental Protection Agency (EPA) conducted an inspection of the ERDF during the week of November 10 (See Attachment 1). During the inspection, Tank 1 of the leachate management tanks was noted as having a leak averaging approximately three gallons per day. EPA had previously been notified of a potential leak in Tank 1 in early September and was informed by Bechtel Hanford Inc. (BHI) that a plan of action would be developed. Records indicate that the

tank had been leaking since September 5, 1997. No plan of action had been formulated by BHI until November 6, 1997 when the construction contractor for the facility was requested to submit a schedule for the repair. The tank remained in operation until November 14, when all leachate was removed from the tanks for shipment to the Effluent Treatment Facility (ETF). Repairs on Tank 1 were subsequently completed by November 26, 1997.

Failure to remove the tank from service violates the requirement set forth in 40 CFR § 264.196 and WAC 173-303-640(7).

Failure to Notify of a Modification to Operations which Increase the Potential Emissions from ERDF

Agreements for compliance to WAC 246-247 and 40 CFR Part 61, Subpart H were made and documented in April 24, 1996 meeting minutes, "ERDF Operational Air Monitoring" and the subsequent "Environmental Restoration Disposal Facility, Waste Disposal Operations, Environmental Monitoring Plan"; RFS-ERDF-002-4, Rev. 0. Both documents use the basis of maintaining the open working face of the waste contained within the ERDF of a maximum value of 6,600 Square Feet. This value was used to determine the Potential to Emit of $<8.29E-03$ mrem/year to the maximally exposed individual (MEI) and was the basis for the ERDF environmental monitoring program.

The open working face at the ERDF has subsequently been increased to 50,000 square feet. Preliminary calculations presented by Bechtel to EPA and DOH in December indicate that the Potential to Emit now exceeds 0.1 mrem/year to the MEI. This results in the ERDF becoming a major diffuse/fugitive emissions source under both WAC 246-247 and 40 CFR Part 61, Subpart H requiring prior approval of operations procedures and monitoring. The working open face expansion occurred without the notification or approval of EPA or DOH.

Failure to Label Containers

WAC 173-303-630(3) and 40 CFR § 264.196 require that the Department of Energy (DOE) assure that containers are adequately labeled to identify the major risks associated with the contents. In addition, the *Strategy for Management of Investigation Derived Waste*, signed by EPA, the Washington State Department of Ecology (Ecology) and DOE, includes the substantive portions of RCRA, WAC 173-303 and CERCLA concerning handling and storage of investigation derived waste. Ecology conducted an inspection of the 200-UP-1 Operable Unit on September 9 and 11, 1997 (See Attachment 2). During the inspection, several 55-gallon drums were observed to be improperly labeled, lacking "hazardous" markings, waste code identifiers and markings identifying the major risks associated with the waste. Two drums in the container storage area were also mislabeled as "process water" when in fact one was an empty drum and the other contained resin waste.

In addition, two containers of spent resin and filter waste were not managed in the

designated container management area described in the 200-UP-1 Waste Control Plan. The two drums were initially identified by BHI during the October 7, 1997 inspection as empty until Ecology requested the lids opened whereupon they were discovered to contain spent effluent filters from UP-1. BHI was unable to identify the contents of two drums due to complete lack of any labeling.

DOE and BHI's failure to adequately label and safely manage containers containing hazardous waste is a violation of WAC 173-303-630(3), 40 CFR Part 262 Subpart C, 40 CFR Part 264 Subpart I, the 200-UP-1 ROD, and the agreed to *Strategy for Management of Investigation Derived Waste*.

NOTE: The above violation is reflective of an earlier Notice of Correction (NOC) issued to DOE in April 29, 1996 for the 200-UP-1 Operable Unit. In the NOC, Ecology cited DOE for failure to manage the 200-UP-1 waste containers in accordance with the agreed to *Strategy for Management of Investigation Derived Waste*. Though corrections were made specific to the NOC, it is apparent that no changes were made within the system to keep this from recurring.

Issues of Concern Requiring Correction

200-UP-1 Operable Unit

Item 1. Ecology's review of BHI documentation revealed an incomplete analytical data set was used by BHI in preparing UP-1 Investigation Derived Waste (IDW) soils for shipment to the ERDF at the time of Ecology's September inspection. BHI failed to use readily available data from samples of UP-1 IDW in preparing UP-1 IDW for shipment to the ERDF.

During a follow-up meeting concerning the 200-UP-1 Operable Unit with DOE and BHI, information was presented to Ecology regarding the waste designation process. Ecology was informed that 200-ZP-1 data was used in the development of the waste profile used for the designation of material generated as part of the 200-UP-1 treatability test. BHI prepared ERDF Waste Profile Data Sheets for UP-1 soils IDW using "worst case" constituent concentration data from various sources such as UP-1 pump and treat resin sample data and 200-ZP-1 operable unit well data. Ecology discovered, by reviewing data from the Hanford Environmental Information System (HEIS), that some UP-1 soil samples exhibited higher constituent concentrations than BHI's worst case presentations in the ERDF Waste Profile Data Sheet, Revision 00, in use at the time of Ecology's inspection. Therefore, BHI's ERDF Waste Profile Data Sheet did not present "worst case" data as it was presented to be. Furthermore, substantiating data for UP-1 IDW was not gathered, documented, or presented as required by the IDW Strategy, ERDF Acceptance Criteria, or BHI's Waste Management Plan, BHI-EE-10. BHI subsequently revised their ERDF Waste Profile Data Sheet for UP-1 soils after Ecology presented its concerns regarding use of complete and comprehensive data for preparing UP-1 soils for shipment to the ERDF.

Item 2. Ecology's review of BHI documentation revealed tracking analytical data used to characterize and designate IDW from UP-1 was unclear and difficult to follow. BHI procedures implementing requirements of the IDW Strategy and substantive requirements of WAC 173-303 were poorly coordinated, not current to management activities actually being performed, and deviated substantially from ERDF acceptance criteria.

BHI's Waste Management Plan, BHI-EE-10, was not being implemented as written and did not meet the requirements of the IDW Strategy or ERDF Waste Acceptance Criteria. Also, the ERDF Waste Profile Data Sheet in use at the time of Ecology's September inspection for shipping waste to the ERDF had been modified from the format referenced in BHI-EE-10. Specifically, references to analytical sampling series and HEIS sample numbers specified in BHI-EE-10 were deleted from the ERDF Waste Profile Data Sheet, Revision 00, in use at the time of Ecology's September inspection. Documentation tracking analytical data used to characterize and designate IDW from UP-1 was unclear and difficult to follow. IDW at the UP-1 operable unit was not being prepared for disposal in the ERDF per the requirements set forth in the ERDF Waste Acceptance Criteria.

Item 3. BHI's Waste Profile Data Sheet in use for preparing UP-1 IDW soils for shipment to the ERDF at the time of Ecology's September inspection did not contain a complete listing of constituents present in the IDW.

Revision 00 of BHI's ERDF Waste Profile Data Sheet was being used for preparing UP-1 IDW soils for shipment to the ERDF at the time of Ecology's September inspection. BHI revised their UP-1 IDW soil's ERDF Waste Profile Data Sheet, Revision 00, after Ecology presented its concerns that the information in this profile did not reference actual UP-1 groundwater well data. Subsequent to hearing Ecology's concerns, BHI revised its ERDF Waste Profile Data Sheet for UP-1 IDW soils to include actual UP-1 well data and HEIS data resulting in Rev. 02 of BHI's ERDF Waste Profile Data Sheet for UP-1 IDW soils. Revision 02 of BHI's ERDF Waste Profile Data Sheet for UP-1 IDW soils contained many constituents not listed in revision 00. Ecology's September inspection revealed the data used by BHI to prepare UP-1 soils for shipment to the ERDF at the time of Ecology's September inspection was poorly documented and incomplete.

Item 4. On September 9, 1997, Ecology noted approximately twenty open 55-gallon steel drums in the UP-1 container storage area. At the time of the observation no workers were present at the UP-1 container storage area. Per WAC 173-303-630 (5)(a) and 40 CFR § 264.173, a container holding dangerous waste must always be closed, except when it is necessary to add or remove waste. At the time of Ecology's observations on September 9, 1997, no personnel were adding or removing waste from these containers nor were any personnel present at the UP-1 container management area.

100-BC Remediation

Item 1. As part of the air monitoring requirements, DOE agreed to collect a number of background soil samples in the 100-BC-1 Operable Unit (See letter dated July 10, 1996 to A.W. Conklin from DOE). The letter indicates that DOE would like to schedule a meeting with the Washington State Department of Health (DOH) to further discuss the background samples and required analyses. However, DOE and BHI unilaterally decided that background samples were not required and subsequently disposed of the samples prior to analysis. This action is inconsistent with the agreements made in the meeting and does not follow the intent of WAC 246-247.

Required Actions

EPA, Ecology, and the DOH (the Agencies) perceive these violations and previous incidents to be an indication of a more serious operational deficiency on the part of DOE and BHI. The Agencies expect DOE to respond within 30-days of receipt of the NOV, documenting the following changes and/or actions that DOE will take to correct the violations and the time frame for completing such actions.

- The leachate tanks at the ERDF have been in operation since July 1996. Since the start of operation, it has been noted that the tanks have leaked several times. DOE shall provide documentation demonstrating that the problems with the leaks ERDF tanks have been rectified. If cessation of tank leaks cannot be demonstrated, then DOE must immediately discontinue use of those tanks and remove them from service as required by 40 CFR § 264.196 and WAC 173-303-640(7). In addition, DOE and EPA shall meet to discuss further actions concerning leachate containment. Additionally, the Leachate Management Plan must be modified by the addition of procedures that adequately addresses the discovery of leaks within the leachate containment system (tanks and associated piping). The modified Leachate Management Plan must be sent to EPA within 30-days of receipt of the NOV.
- DOE shall work with both the lead regulatory agency and DOH to define all applicable air monitoring requirements. DOE should inform the regulatory agencies of any changes to operating procedures that have potential impacts to WAC 246-247 compliance. Within 30 days of DOE's receipt of this NOV, the following actions shall occur:
 - i. Determine the date of the modification of operations that exceeded the 6,600 square feet and the days of operation at that level.
 - ii. Provide the volume and estimated radionuclide inventory disposed to the ERDF during calendar year 1997.
 - iii. Provide a summary of ERDF radiation surveys and soil, vegetation, TLD, and ambient air data, for calendar year 1997.
 - iv. Rerun the Potential to Emit calculations using the estimated total

- v. radionuclide inventory for the facility for the current working area. Reevaluate the current environmental monitoring program for the expansion to 50,000 square feet.
 - vi. Seek approval from the regulators to expand operations to 50,000 square feet. If approval cannot be reached within in 45-days, operations shall be returned to 6,600 square feet of working area.
- Within 30-days of receipt of the NOV, DOE must provide documentation of changes implemented on site concerning hazardous and solid waste management to ensure contractor compliance with the RCRA ARARs identified in RODs and consistent with the Strategy for Management of Investigation Derived Waste. Additionally, within 30-days of receipt of the NOV, DOE shall submit a report documenting the inventory of all remaining CERCLA-related investigation waste stored on the Hanford site and a schedule for disposition of such wastes. Any future deviation from the RODs, RCRA, 40 CFR Parts 262 or 264, WAC 173-303-630 or the approved strategy specific to investigation derived waste handling, storage, characterization or disposal must be negotiated with the appropriate regulatory agency prior to implementation. EPA and Ecology will work with DOE on a revision of the Strategy for Management of Investigation Derived Waste.
- It is the Agencies expectation that all waste destined for disposal at ERDF is sampled in accordance with an approved sampling and analysis plan (SAP) for that operable unit. This SAP shall be approved by the lead regulatory agency for that unit. Only sampling data for that unit will be used in the development of a waste profile unless an agreement has been made with the regulators to utilize data from an analogous site. If such an agreement is made, DOE shall provide documentation specifying these changes.

EPA Reservation of Rights

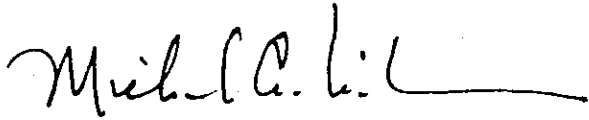
Notwithstanding this NOV or DOE's response, EPA reserves the right to take any action pursuant to RCRA, CERCLA, or any other applicable legal authority, including without limitation, the right to seek injunctive relief, implementation of response actions or corrective measures, cost recovery, monetary penalties, and punitive damages. DOE's response to this NOV does not constitute compliance with ARARs.

DOH and Ecology may choose to pursue further enforcement actions beyond those identified in this letter under their own authorities.

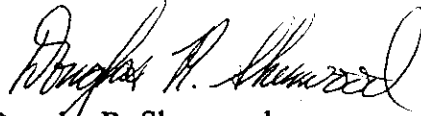
Nothing in this NOV or DOE's response shall affect DOE's duties, obligations, or responsibilities with respect to the Hanford Site under local, state, or federal law or regulation.

Thank you for your prompt attention to these matters. If you or any of your staff has any questions with regard to this NOV, please contact either Bob Wilson of Ecology at (509) 736-3031, Pamela Innis of EPA at (509) 376-4919 or Allen Conklin of the DOH at (360) 586-0254.

Sincerely,



Michael Wilson
Nuclear Waste Program Manager
Washington State Department of Ecology



Douglas R. Sherwood
Hanford Project Manager
Environmental Protection Agency



John L. Erickson
Director, Radiation Protection Program
Washington State Department of Health

Attachments

cc: Dean Ingemansen, EPA
Ron Skinnerland, Ecology
Steve Alexander, Ecology
Jack Donnelly, Ecology
Moses Jaraysi, Ecology
Rich Holten, DOE
Owen Robertson, DOE
Nancy Werdel, DOE
John Schmidt, DOH
Steve Lytle, BHI
K. Michael Thompson, DOE
Administrative Record (100 Area General, 200-UP-1, 200-DF-1/ERDF)